



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,350	02/06/2004	Young-bok Ju	46008	5046
1609 7590 06/04/2007 ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036			EXAMINER RILEY, MARCUS T	
			ART UNIT 2625	PAPER NUMBER
			MAIL DATE 06/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/772,350	Applicant(s) JU ET AL.	
	Examiner Marcus T. Riley	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/06/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informality:

Regarding claim 1; claim 1 states in part “...*and a second position for scanning a sheet of paper in the scanning operation*”. It should read “...*and a second position for scanning a sheet of paper in the printing operation*”. This appears to be a typographical error and it is assumed for continued examination purposes that it is intended to be “*the printing operation*”.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

Art Unit: 2609

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claim 15 is rejected under 35 U.S.C. 102(b) as being clearly by Yamada (US 5,812,172, hereinafter Yamada '172).

Regarding claim 15; Yamada '172 discloses at least one scanner unit fixed to a printer carriage unit via a scanner fixing unit, said fixing unit provided to communicate at least one of a first, second and third linear motion and a first rotational motion to said scanner unit [*("The present invention generally relates to image reading and printing units, and more particularly to an image reading and printing unit which is mounted on a carriage of a serial printer and reads and prints images.")* column 1, lines 9-12, *see also* column 4, lines 26-31 (*"The sensor moving means 28 is provided with a driving mechanism 44 for linearly moving the image sensor 24 in the direction D or E using the shaft 42 as the guide."*)]; at least one controller provided to control said scanner to travel between a first position for scanning a document, and a second position for scanning a sheet of paper via said first linear motion, said controller further provided for controlling said scanner to rotate between a first direction for scanning a document, and a second direction for scanning a sheet of paper via said first rotational motion (*"Another and more specific object of the present invention is to provide an image reading and printing unit comprising a carriage movable in a scan direction perpendicular to a transport direction of a sheet that is transported, carriage moving means for moving the carriage in the scan direction, transfer means, arranged parallel to the scan direction with the transported sheet interposed between the transfer means and the carriage, for cooperating a transfer of an image onto the sheet, printing means, mounted on the carriage, for printing the image on the sheet in a printing*

Art Unit: 2609

mode by moving from a receded position to a print position towards the sheet on the transfer means under the cooperation of the transfer means, image reading means, mounted on the carriage together with the printing means, for reading an image printed on the transported sheet in a reading mode, and moving means for moving the image reading means to make contact with the sheet on the transfer means in the reading mode so as to read the image printed on the sheet.” column 2, lines 14-34); at least one printer carriage to travel via said second and third linear motion for achieving at least one function comprising printing a sheet of paper, scanning a sheet of paper and scanning a document (“The present invention generally relates to image reading and printing units, and more particularly to an image reading and printing unit which is mounted on a carriage of a serial printer and reads and prints images.”) column 1, lines 9-12, see also column 4, lines 26-31 (“The sensor moving means 28 is provided with a driving mechanism 44 for linearly moving the image sensor 24 in the direction D or E using the shaft 42 as the guide.”)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (US 5,812,172, hereinafter Yamada ‘172) in combination with. Itoyama et al. (US 6,488,353, hereinafter Itoyama ‘353). Itoyama ‘353 teaches a scanner unit having a scanner so as to perform a scanning operation, the scanner comprising at least one sensing face (“The scanner unit 16

Art Unit: 2609

shown in FIG. 4, only one carriage 34 is provided, and all of the lamp 26, the first, second, and third mirrors 27, 28, 29, and the line sensor 31 are mounted on the carriage 34." column 5, lines 14-17); a printer unit having a carriage to move a print head for jetting ink onto a sheet of paper so as to perform a printing operation (*"The printing portion is constituted of the carriage 72 and the carriage shaft 73, which facilitates a smooth scanning movement of the carriage 72. When a sheet of paper is conveyed to the printing portion, ink is jetted out from the ink heads 38 onto a sheet of paper."* column 5, lines 52-57, see eg. Fig.'s 5 and 6). However, Itoyama '353 does not teach a scanner position adjuster for fixing and supporting the scanner to be movable between a first position for scanning a document in the scanning operation, and a second position for scanning a sheet of paper in the scanning operation.

Yamada '172, in the same field of endeavor of image reading and printing units (*"Image Reading and Printing Units"*, see eg. Title), teaches a scanner position adjuster for fixing and supporting the scanner to be movable between a first position for scanning a document in the scanning operation, and a second position for scanning a sheet of paper in the scanning operation and a scanner fixing unit further comprising a fixer for fixing the scanner position adjuster on the carriage to allow the scanner to move together with the carriage when the carriage moves, and at the same time, to allow the scanner position adjuster to selectively move the scanner between the first and the second position (*"Another and more specific object of the present invention is to provide an image reading and printing unit comprising a carriage movable in a scan direction perpendicular to a transport direction of a sheet that is transported, carriage moving means for moving the carriage in the scan direction, transfer means, arranged parallel to the scan direction with the transported sheet interposed between the transfer means*

Art Unit: 2609

and the carriage, for cooperating a transfer of an image onto the sheet, printing means, mounted on the carriage, for printing the image on the sheet in a printing mode by moving from a reeded position to a print position towards the sheet on the transfer means under the cooperation of the transfer means, image reading means, mounted on the carriage together with the printing means, for reading an image printed on the transported sheet in a reading mode, and moving means for moving the image reading means to make contact with the sheet on the transfer means in the reading mode so as to read the image printed on the sheet.” column 2, lines 14-34).

It would have been obvious at the time the invention was made to one of ordinary skill in the art for the scanner unit Itoyama ‘353 to include the scanner position adjuster of Yamada ‘172 for fixing and supporting the scanner of Itoyama ‘353 to be movable between a first position for scanning a document in the scanning operation, and a second position for scanning a sheet of paper as taught by Yamada ‘172, because this would improve the quality of reading with respect to the transported document (“...*there are demands to improve the quality of the reading with respect to the transported document, and it is necessary to prevent focal error, change in magnification and the like caused by flapping or the like of the transported document.*” Yamada ‘172 at column 1, lines 17-21).

Regarding claim 2; Itoyama ‘353 discloses where the document comprises at least one scan surface from which data is received (“*The scanner 1 (as the image reading device) is to used for reading a reflected light from a document, placed on a document table, by a line sensor (CCD) while scanning a line of the sub scanning direction in the main scanning direction by the carriage with a light source.*” column 3, lines 57-61);

Regarding claim 3; Itoyama '353 discloses where the paper comprises at least one print surface upon which data is transferred (*"When a document 25 is placed on the paper feed portion 20, the printer portion 17 receives a request from the computer or the like to print image information."* column 5, lines 46-48);

Regarding claim 4; Yamada '172 discloses a rotating member for fixing and supporting the scanner to be rotatable between a first and a second direction, the first direction being a scanner orientation wherein the sensing face of the scanner is directed toward a scan surface of the document, and the second direction being a scanner orientation wherein the sensing face of the scanner is directed toward a print surface of the paper (*"The sensor moving means 28 is provided with a driving mechanism 44 for linearly moving the image sensor 24 in the direction D or E using the shaft 42 as the guide. The image sensor 24 makes contact with the document 36 when moved in the direction D. The driving mechanism 44 includes a motor 45 as its driving part, and this motor 45 can rotate in forward and reverse directions."* column 4, lines 25-31); a lifting member for ascending and descending the rotating member between the first and second position to maintain the scanner at a desired sensing distance with respect to at least one of the document and the sheet of paper (*"...the moving quantity (or distance) of the image sensor 24 in the directions D and E is determined by the span or length of the gear teeth 47a of the partially toothed gear 47, and the image sensor 24 can be positioned by rotating the motor 45 in the forward or reverse direction and stopping the motor 4. In other words, it is possible to position the image sensor 24 along the directions D and E without having to detect the position of the image sensor 24, and the image sensor 24 can be fixed to a predetermined position by a simple*

Art Unit: 2609

operation of controlling the motor 45 to rotate for a predetermined time and to stop. column 5, lines 6-14);

Regarding claim 5; Yamada '172 discloses where the rotating member comprises a first driving motor having a first rotating axis for immovably fixing the scanner thereon (*"The sensor moving means 28 is provided with a driving mechanism 44 for linearly moving the image sensor 24 in the direction D or E using the shaft 42 as the guide. The image sensor 24 makes contact with the document 36 when moved in the direction D. The driving mechanism 44 includes a motor 45 as its driving part, and this motor 45 can rotate in forward and reverse directions."* column 4, lines 25-31);

Regarding claim 6; Yamada '172 discloses a lifting belt for fixing the first driving motor thereon, the lifting belt having a first and second end; a driving and a driven pulley each having an axis, for supporting the first and second ends of the lifting belt, respectively, and for rotating the lifting belt along a path between the driving and driven pulleys to ascend and descend the first driving motor fixed on the lifting belt; and a second driving motor having a second rotating axis connected with an axis of the driving pulley (*"FIG. 4 is a plan view for explaining the movement of the carriage 22 shown in FIGS. 2A, 2B and 3. In FIG. 4, a driving motor 31 is provided on one end of a moving range of the carriage 22, The driving motor 31 rotates a pulley 31a, and is provided under the carriage 22 when viewed from the front. A timing belt 32 is provided across the pulley 31a and a pulley 31b which is provided at the other end of the moving range of the carriage 22. This timing belt 32 engages a lower part of the carriage 22, and the carriage 22 is moved in the scan direction A or B under the guidance of the guide part 26.*

Art Unit: 2609

Hence, the driving motor 31, the pulleys 31a and 31b, and the timing belt 32 form a carriage moving means.” column 3, lines 54-65);

Regarding claim 7; Yamada ‘172, a plurality of brackets installed on the carriage to rotatably support the ends of the axis of the driven pulley and the ends of the axis of the driving pulley, wherein the axis of the driving pulley is further connected with the second rotating axis of the second driving motor (*“FIG. 4 is a plan view for explaining the movement of the carriage 22 shown in FIGS. 2A, 2B and 3. In FIG. 4, a driving motor 31 is provided on one end of a moving range of the carriage 22, The driving motor 31 rotates a pulley 31a, and is provided under the carriage 22 when viewed from the front. A timing belt 32 is provided across the pulley 31a and a pulley 31b which is provided at the other end of the moving range of the carriage 22. This timing belt 32 engages a lower part of the carriage 22, and the carriage 22 is moved in the scan direction A or B under the guidance of the guide part 26. Hence, the driving motor 31, the pulleys 31a and 31b, and the timing belt 32 form a carriage moving means.” column 3, lines 54-65);*

Regarding claim 12; Itoyama ‘353, discloses securing at least one scanner unit to a printer carriage unit via a scanner fixing unit, said fixing unit provided to communicate at least one of a first, second and third linear motion and a first rotational motion to said scanner unit (*“The printing portion is constituted of the carriage 72 and the carriage shaft 73, which facilitates a smooth scanning movement of the carriage 72. When a sheet of paper is conveyed to the printing portion, ink is jetted out from the ink heads 38 onto a sheet of paper.” column 5, lines 52-57);* Yamada ‘172 discloses a controlling said scanner to travel between a first position for scanning a document, and a second position for scanning a sheet of paper via said first linear

Art Unit: 2609

motion, further controlling said scanner to rotate between a first direction for scanning a document, and a second direction for scanning a sheet of paper via said first rotational motion (*"Another and more specific object of the present invention is to provide an image reading and printing unit comprising a carriage movable in a scan direction perpendicular to a transport direction of a sheet that is transported, carriage moving means for moving the carriage in the scan direction, transfer means, arranged parallel to the scan direction with the transported sheet interposed between the transfer means and the carriage, for cooperating a transfer of an image onto the sheet, printing means, mounted on the carriage, for printing the image on the sheet in a printing mode by moving from a receded position to a print position towards the sheet on the transfer means under the cooperation of the transfer means, image reading means, mounted on the carriage together with the printing means, for reading an image printed on the transported sheet in a reading mode, and moving means for moving the image reading means to make contact with the sheet on the transfer means in the reading mode so as to read the image printed on the sheet."* column 2, lines 17-34); and controlling said printer carriage to travel via said second and third linear motion for achieving at least one function comprising printing a sheet of paper, scanning a sheet of paper and scanning a document (*"The sensor moving means 28 is provided with a driving mechanism 44 for linearly moving the image sensor 24 in the direction D or E using the shaft 42 as the guide. The image sensor 24 makes contact with the document 36 when moved in the direction D."* column 4, lines 25-29);

6. **Claims 8-11, 13 and 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Yamada '172 and Itoyama '353 as applied above to claim 1, and further in view of Matsuda '414 (US 6,633,414, hereinafter Matsuda '414).

Regarding claim 8; Yamada '172 and Itoyama '353 combination does not expressly teach a *"a rotating and lifting member for fixing and securing the scanner to be rotatable between a first and a second direction."* Matsuda '414 teaches a rotating and lifting member for fixing and securing the scanner to be rotatable between a first and a second direction, the first direction being a scanner orientation wherein the sensing face of the scanner is directed toward a scan surface of the document, and the second direction being a scanner orientation wherein the sensing face of the scanner is directed toward a print surface of the paper; and said rotating and lifting member further provided for fixing and securing the scanner to be ascendable or descendable to allow the scanner to maintain a desired sensing distance with respect to at least one of the document and the sheet of paper (*"The sensor moving means 28 is provided with a driving mechanism 44 for linearly moving the image sensor 24 in the direction D or E using the shaft 42 as the guide. The image sensor 24 makes contact with the document 36 when moved in the direction D. The driving mechanism 44 includes a motor 45 as its driving part, and this motor 45 can rotate in forward and reverse directions."* column 4, lines 25-31, see also column 5, lines 4-18 *"...the moving quantity (or distance) of the image sensor 24 in the directions D and E is determined by the span or length of the gear teeth 47a of the partially toothed gear 47, and the image sensor 24 can be positioned by rotating the motor 45 in the forward or reverse direction and stopping the motor 4. In other words, it is possible to position the image sensor 24 along the directions D and E without having to detect the position of the image sensor 24, and the image sensor 24 can be fixed to a predetermined position by a simple operation of controlling the motor 45 to rotate for a predetermined time and to stop. Of course, if the partially toothed gear 47 is not used, it is possible to provide limit switches within the moving*

Art Unit: 2609

range of the image sensor 24 for the purposes of detecting the position and restricting the movement of the image sensor 24.”);

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the printer/scanner as taught by the combination of Yamada ‘172 and Itoyama ‘353 and modify it to *“a rotating and lifting member for fixing and securing the scanner to be rotatable between a first and a second direction”* as required by Matsuda ‘414, so that the printer/scanner can achieve improved maintainability as taught by Matsuda ‘414 (*“Another object of the present invention is to provide an apparatus having a printer and a scanner that can achieve improved maintainability.”* Matsuda ‘414 at column 2, lines 3-5).

Regarding claim 9; Yamada ‘172 discloses a third driving motor having a third rotating axis; and a lifting part for fixing the scanner on the third rotating axis to ascend or descend the scanner according to the rotating operation of the third rotating axis (*“...the moving quantity (or distance) of the image sensor 24 in the directions D and E is determined by the span or length of the gear teeth 47a of the partially toothed gear 47, and the image sensor 24 can be positioned by rotating the motor 45 in the forward or reverse direction and stopping the motor 4. In other words, it is possible to position the image sensor 24 along the directions D and E without having to detect the position of the image sensor 24, and the image sensor 24 can be fixed to a predetermined position by a simple operation of controlling the motor 45 to rotate for a predetermined time and to stop. Of course, if the partially toothed gear 47 is not used, it is possible to provide limit switches within the moving range of the image sensor 24 for the purposes of detecting the position and restricting the movement of the image sensor 24.”* column 5, lines 4-18);

Regarding claim 10; Yamada '172 discloses at least one of a circular disk and a bar for immovably fixing the scanner at a radial outer end thereof and fixed vertically to the third rotating axis at an end of the third rotating axis (*"...the moving quantity (or distance) of the image sensor 24 in the directions D and E is determined by the span or length of the gear teeth 47a of the partially toothed gear 47, and the image sensor 24 can be positioned by rotating the motor 45 in the forward or reverse direction and stopping the motor 4. In other words, it is possible to position the image sensor 24 along the directions D and E without having to detect the position of the image sensor 24, and the image sensor 24 can be fixed to a predetermined position by a simple operation of controlling the motor 45 to rotate for a predetermined time and to stop. Of course, if the partially toothed gear 47 is not used, it is possible to provide limit switches within the moving range of the image sensor 24 for the purposes of detecting the position and restricting the movement of the image sensor 24."* column 5, lines 4-18);

Regarding claim 11; Matsuda '414 discloses at least one fixing bracket formed at the third driving motor; and at least one screw member for fixing the fixing bracket at the carriage (*"That is, fulcrum projection grooves 30, locking pawl grooves 31, shift stopper grooves 32, and rotation stoppers 33 are provided on both ends of the scanner unit 6 so as to ensure that the scanner unit 6 is detachably but positively engaged and held by the printer unit 2. On the printer unit 2 provided are fulcrum projections 34, locking pawls 35, shift stoppers 36, and rotation stopper grooves 37 to engage with the above-mentioned members. The fulcrum projections (or pivotal shafts) 34 are for allowing the scanner unit 6 to rotate. The fulcrum projection grooves (or recesses) 30 are for receiving and holding the fulcrum projections 34. The locking pawls 35, shift stoppers 36 and rotation stoppers 33 are for holding and fixing the scanner unit 6. The*

Art Unit: 2609

locking pawl grooves 31, shift stopper grooves 32 and rotation stopper grooves 37 are for receiving and holding the locking pawls 35, shift stoppers 36 and rotation stoppers 33, respectively. The fulcrum projection grooves 30, locking pawl grooves 31, shift stopper grooves 32 and/or rotation stoppers 33 may be provided on the printer unit 2, and fulcrum projections 34, locking pawls 35, shift stoppers 36 and/or rotation stopper grooves 37 may be provided on the scanner unit 6.” column 4, lines 43-64);

Regarding claim 13; Matsuda '414 discloses where the first and second linear motion are orthogonal (*“In FIG. 6, numeral 40 refers to an ink cartridge having an ink-jet type printer head 41, 42 to a carriage for moving the ink cartridge 40 in the printing direction (in the direction orthogonally intersecting with the flow of printer paper), 43 to a rail for guiding the movement of the carriage 42.”* column 5, lines 58-63);

Regarding claim 14; Matsuda '414 discloses where the second and third linear motion are orthogonal (*“In FIG. 6, numeral 40 refers to an ink cartridge having an ink-jet type printer head 41, 42 to a carriage for moving the ink cartridge 40 in the printing direction (in the direction orthogonally intersecting with the flow of printer paper), 43 to a rail for guiding the movement of the carriage 42.”* column 5, lines 58-63);

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus T. Riley whose telephone number is 571-270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

Art Unit: 2609

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



BRIAN WERNER
SUPERVISORY PATENT EXAMINER

Marcus T. Riley
Assistant Examiner
Art Unit 2609